

REMARKS/ARGUMENTS

Substitute specification pursuant to 37 CFR 1.125(b)

In accordance with the Examiner's request, a substitute specification excluding the claims has been provided to clarify the numerous changes to the specification and to address the issue of sentence fragments. Since the substitute specification contains additional subject matter not of record, a marked-up copy showing the amendments is also provided. The substitute specification contains no new matter.

To further clarify, the Summary of the Invention on pages 2 and 3 has been amended for conformity with amended independent claim 18, the first independent claim, as discussed below.

In the fourth paragraph of the Description of Preferred and Other Embodiments, now commencing on page 4, line 5, the phrase "...accept storage means in the form of..." was added in the previous amendment, but was not marked-up as an amendment. For the sake of clarity and to aid the Examiner, it has been marked-up in the substitute specification to ensure that it is entered as an amendment. Basis for this amendment can be found in the original specification on page 2, lines 9-10.

On page 4, the erroneous reference to the instant specification has been deleted and replaced with the correct reference number. As requested by the Examiner in paragraph 2 of the Office Action, the disclosure has been amended to include the relevant material incorporated by reference. A declaration is appended to this paper stating that the amendatory material consists of the same material incorporated by reference to the referenced US patent application.

In accordance with the Examiner's request, reference on page 4 to US Patent Application No. 09/436,508 has been amended to the now patent number 6,626,529.

Drawings

Further to MPEP §608.02(r), the applicant's approved proposed amendments to the drawings have been included in a separate letter to the Official Draftsman. The proposed corrected drawings address each of the Examiner's objections. No new matter has been added to the drawings.

Additionally, reference numerals have been added to Fig 12 and the disclosure has been amended accordingly.

Typographical errors in Fig 12 have also been corrected. Namely, in the first step, "STAR GAME" has been corrected to read "START GAME". In the decision box, "REACHED3" has been corrected to read "REACHED?".

Claim objections

Claims 37-41 were objected to for being dependent from cancelled claims 19, 22. Amendments have been made to the dependencies of claims 37-39 to address the Examiner's objections.

Claim Rejections – 35 USC §102(e), 103(a)

Claims 18, 20-21, 23-29, 32-34, 37, 39-41, 65-66, 68-72, 74-75, 77-79, 81 and 83-85 were rejected under 35 U.S.C. 102(e) as being anticipated by Kelly et al. (5,816,918).

Claims 42-43, 45-56, 58, 60-62 were rejected under 35 U.S.C. 102(e) as being anticipated by Kelly et al. or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kelly et al. in view of either Ferguson (3,843,132) or Heckman (5,291,243).

Claims 30-31, 57, 59, 80 and 82 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly et al. or Kelly et al. in view of either Ferguson or Heckman.

Claims 38, 44 and 67 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly et al. in view of either Kamille (5,931,467) or Schneier (5,768,382) or, in the alternative, claim 44 was rejected under 35 U.S.C. 103(a) as being unpatentable over Kelly et al. in view of either Ferguson or Heckman and further in view of Kamille or Schneier.

Claims 18, 20-21, 23-37, 39-41, 65-66, 68-87 were rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook (5,566,290) or alternatively, over Silverbrook in view of Invencion (5,718,631) or Kelly et al.

Claims 42-43 and 45-64 were rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook or, in the alternative, over Silverbrook in view of either Invencion or Kelly et al. and further in view of Ferguson or Heckman.

Claims 38, 44 and 67 were rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook in view of either Nagel (5,679,001), Kamille or Schneier or, in the alternative, over Silverbrook in view of either Invencion or Kelly et al., and further in view of either Nagel, Kamille or Schneier or, in the alternative, over Silverbrook in view of either Invencion or Kelly, and further in view of either Ferguson or Heckman, and further in view of either Nagel, Kamille or Schneier.

Taking into account the Examiner's helpful comments in paragraph 13 of the Office Action, to address the rejections recited above, independent claims 18, 42 and 65 have been amended to clarify that the ink supply unit and print media supply are housed jointly in a replaceable cartridge, thus limiting the invention as claimed accordingly. Basis for the amendment may be found, for example, on page 2, lines 5-7. None of the prior art of record, whether taken alone or in combination, discloses, suggests or renders obvious such a feature. Hence, independent claims 18, 42 and 65 and the claims dependent thereon are both novel and non-obvious.

In light of the above amendments and remarks, it is submitted that the application is now in condition for allowance. Reconsideration and allowance of the application is courteously solicited.

Very respectfully,

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A VIDEO GAMING CONSOLE WITH INTEGRAL PRINTER DEVICE

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Field of the Invention

The present invention relates to the field of video games and, more particularly, to
5 a video games console having an integral compact printer device.

Summary of the Invention

In accordance with a first aspect of the present invention, there is provided a video
gaming console device, including a casing that includes a receptacle for accepting
10 detachable storage means, the detachable storage means containing an interactive
program, the casing incorporating:

~~means to receive detachable interactive program storage means for execution by~~
~~said console;~~

communication means for receiving interaction data from at least one control
15 device operable by a user;

~~processing means for executing said interactive program stored on said detachable~~
~~interactive program storage means, said program execution causing the at least partially~~
~~in reliance upon the interaction data, thereby to generate or display images for display~~
~~on output to an image display means;~~

20 ~~communication means to enable operational interaction from control devices~~
~~during execution of said program; and~~

an integral printer apparatus including a printhead, a print media feed mechanism
and a replaceable cartridge, an ink supply unit, and print media feed means supply housed
jointly in said replaceable cartridge;

25 ~~—said printer apparatus being operatively associated with said processing and~~
~~operating means to print out onto print media images relevant to said interactive program~~
one or more gaming images onto print media in response to execution of said interactive
program.

In the preferred form, the ~~console device~~ is designed for use with a detachable
30 controller module that includes a variety of interactive control devices such as joysticks
and control buttons etc. This controller may communicate with the ~~console device~~ by

wireless communication means such as the new "Bluetooth" system or by cable or other suitable communication means.

~~Preferably, the integral printer apparatus includes an internal print media supply unit.~~

5 In the preferred form, the print media is in the form of sheets of paper or card, ~~and the print media supply unit and ink supply unit are jointly housed in a replaceable cartridge assembly.~~

10 In one particularly preferred form, the replaceable cartridge includes a print media feed roller device that interacts with a non-replaceable print media feed mechanism provided within the console device.

Desirably, the interactive program is activated to print out images via the printer apparatus at certain predetermined positions in the program.

15 The printer apparatus preferably comprises an ink jet printer that is optionally in the form of a pagewidth array of ink ejection nozzles which eject ink by means of a series of actuators. Preferably, the actuators are thermal bend actuators.

20 In a preferred form, the detachable program storage means is in the form of a Digital Video Disk also known as a Digital Versatile Disk (DVD) executable by a DVD player. In other similarly preferred forms CD-ROMs and semiconductor memory cartridges can be used in place of DVDs with appropriate drives or connectors, hardware and software.

Brief Description of the Drawings

A preferred embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:

25 Fig. 1 is a front perspective view of a first embodiment video game console according to the invention with detachable controller module, illustrating a printed card being ejected from the integral printer;

Fig. 2 is a front perspective view of the console comprising printer module and DVD module with the top controller module removed;

30 Fig. 3 is a rear perspective of the console shown in Fig. 2;

Fig. 4 is a front view of the console shown in Figs. 2 and 3;

Fig. 5 is a side view of the console assembly shown in Fig. 4;

Fig. 6 is an exploded front perspective view of the console assembly shown in Figs. 2 to 5;

Fig. 7 is a front perspective view of the console with the printer module top cover removed;

5 Fig. 8 is an exploded perspective view of the printer apparatus including the printhead, print media feed mechanism and printhead ink distribution assembly but excluding the ink supply;

Fig. 9 is a front perspective view of the console showing the printer module in the raised position for insertion of the print media and ink supply cartridge;

10 Fig. 10 is a schematic view of the assembly shown in Fig. 9 illustrating insertion of a DVD into the DVD player module;

Fig. 11 is a block diagram showing components of the video gaming device of Fig. 1;
15 and

Fig 12 is a flowchart showing steps involved in implementation of a preferred embodiment of the invention.

20 Description of Preferred and Other Embodiments

In the illustrated preferred embodiment, there is provided a video game player which includes an integral printer which is able to print out, preferably on business card sized cards, information which enhances the interactivity of the video game.

Turning to the figures, there is shown a video game console 1 comprising a printer
25 module 2 and Digital Video Disk (DVD) player module 3. Connected to the console is an optional detachable controller module 4 as shown in Fig. 1. The detachable controller module can communicate with the console by any suitable means including wireless systems such as "Bluetooth" or cable etc. and can be releasably secured to the console by any suitable means including magnetic coupling 5 or mechanical interlocking.

30 The printer module 2 and DVD player module 3 are interconnected by means of connecting housing extensions 6 and 7 which hinge about pivots 8 as shown in Fig. 3. The lower connecting extension 7 preferably includes various input/output connectors

and ports 9 for optionally connecting joysticks and other interactive devices. A video outlet port 50 is also provided for connection with standard video type devices as is common in the art. Further ports can also be provided for an external power source or other devices such as sound systems to be interconnected to the console.

5 The DVD player module 3 is able to ~~take~~ accept storage means in the form of standard DVD games discs 10 as is becoming popular in the industry. The DVD player is interconnected to a high-end processor 51, which can be constructed along similar lines to standard high-end video game processors. The processor in turn utilizes memory 52 for standard video game functions and interacts with a print controller chip 53, which
10 is also preferably housed with the high-end processor on PCB 11 within the printer module 2. The controller chip 53 can be structured along the lines set out in US granted patent application serial number 6,512,59609/437,007, ~~the contents of which are again~~ ~~incorporated by cross reference~~. Batteries for driving the console are preferably located in the base of the DVD player module as shown by arrow 12.

15 The printer module 2 is preferably constructed so as to simultaneously provide a closure for the DVD player module 3. This is achieved by hinging the printer unit to the DVD module as shown. The printer module 2 comprises a base molding 14 that is configured to fully enclose a DVD disk receiving compartment 15 formed in the upper surface of the DVD player module 3. The base molding 14 is further configured to
20 define an integral chassis structure 16 adapted on its under side to receive and locate an ink and paper cartridge 18.

 The upper surface of the chassis structure 16 is configured to support a printhead and ink distribution assembly 19, print media feed mechanism 20, and ink connecting hoses 21, the latter linking ink outlet nozzles 22 on the chassis with ink inlet
25 nozzles 23 provided on the printhead and ink distribution assembly 19. The printer and DVD control PCB 11 is also supported on the chassis 16 and has flexible connections 26 extending therefrom to interconnect the DVD and printer control buttons 27 and 28 provided on a top cover moulding 29.

 Details of the printhead, ink distribution assembly and print media feed means are
30 best illustrated in Fig. 8. The printhead, which is preferably in the form of a pagewidth ink jet printhead chip, is packaged with an ink distribution unit and printhead cover into a printhead module 30. This module 30 is supported on a printhead chassis molding 32,

and further includes a printhead capping mechanism 33, paired drive rollers 34 and 35, stepper motor 36 and an associated gear box 37 that engages the drive rollers 34 and 35.

The preferred ink and paper cartridge is preferably in accordance with that described in the applicant's ~~co-pending~~ U.S. Patent Application No. 09/436,508
 5 6,626,529 the contents of which are incorporated herein by reference. In the alternate embodiment illustrated in the accompanying drawings the ink and paper cartridge 54 comprises a cartridge casing 40 defining an upper print media storage region 41 adapted to hold a stack of paper cards or sheets 42. A card-dispensing outlet is shown at 43. The lower portion of the cartridge casing 40 defines an ink supply region 45 that is separated
 10 internally into four sections each of which connect with piercable ink supply outlets 46. Upon installation, these outlets 46 are pierced by formations in the underside of the base moulding so that ink flows from the cartridge to the outlet nozzles on the chassis 16, via connecting hoses 21, to the printhead and ink distribution assembly 19.

In yet another embodiment, the printer unit and print media container can be snap
 15 fitted into the console.

In use, the console is connected to a video device and a DVD 48 is inserted into the DVD player module 3. Appropriate controllers are then selected. These may be the detachable controller module 4 as shown in Fig. 1, or alternatively other external interactive controllers. The printer can then be operated during execution of the program
 20 in the DVD either manually or automatically as discussed in more detail below.

It will be evident to those skilled in the art that the preferred embodiment provides for a video game system enabling print on demand cards 56. These cards can be utilized for a number of purposes. Firstly, the video game can, at certain predetermined levels, print out a series of 'brag cards'. These can provide a high-
 25 resolution picture that can only be achieved at a certain point in the game. The brag cards can be personalised with the game players name, score, chosen character, accumulated wealth or objects, etc. The cards could also include a photographic likeness where the video game arrangement includes an optional image sensor 55. With such an option, the brag cards could also be personalised with a photographic likeness mapping
 30 on to 3D characters etc.

The DVD player can be adapted to play standard DVD movies in addition to being configured to read CD-ROMs so as to provide information from encyclopaedias, maps

etc provided by other CD-ROMs or DVD disks. In this manner, images from DVD movies and information from such CD-ROM or DVD repositories can be printed out. It should be noted that while the preferred form uses a DVD player or drive, the interactive programs may be stored on CD-ROM or on semiconductor memory cartridges, the latter
5 being popularly used with pocket sized prior art video game devices.

Additionally, although the preferred embodiment described is designed for optional use with non portable external display and control devices, the game storage medium, controls, game processor, screen, audio and printer may all be housed in the same housing, and this may be pocket sized if required.

10 Where educational software is provided, the printer can be utilized to print out standard award certificates or diplomas upon reaching various levels. Such a system provides for an ideal incentive for children utilizing the system to become further involved in educational software running on the system. The utilization of the printer also allows parents to monitor children in the utilization of the device through, for
15 example, the demanding of certain information or diploma certificates being printed out at various steps before the device is able to be utilized as a game playing machine. The arrangement can be synergistic between the game playing and educational software, where the educational software prints out a code or clue for utilization by the user in playing the games. Of course, many other interactive uses can be provided.

20 It will be appreciated by those skilled in the art that numerous variations and/or modifications may be made to the present invention as shown without departing from the spirit or scope of the invention as broadly described. Accordingly, the present embodiment is to be considered in all respects to be illustrative and not restrictive.

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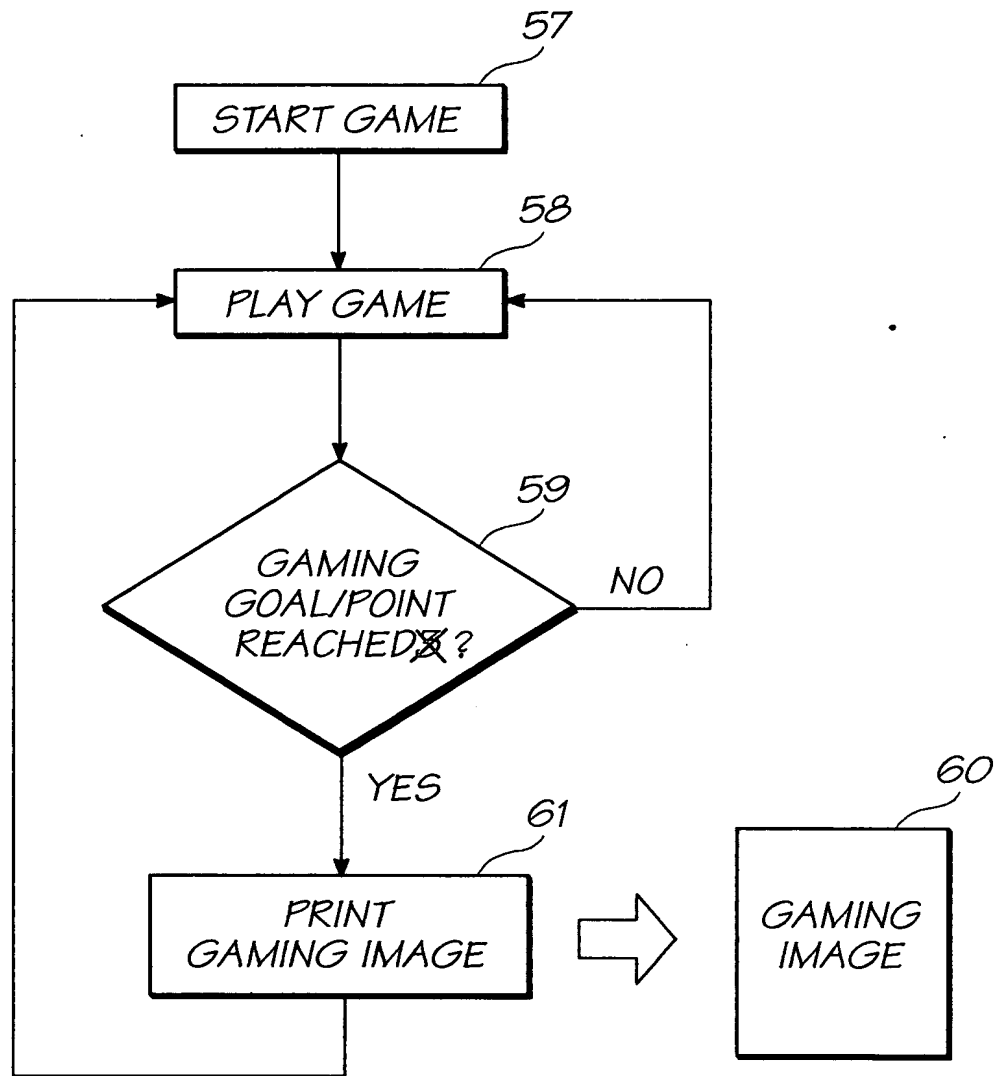


FIG. 12